

Articulating Criteria: Steps for Success

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Creating Credible Criteria: Grade 6 Mathematics

Step 1

Highlight words that designate the level of cognition in the outcome(s).

Step 2

Create a summary statement that captures the essence of the outcome(s).

Step 3

Develop rubric descriptors.

Step 4

Determine instructional support and formative assessment opportunities.

This example models the Application and Evaluation levels of cognition and demonstrates a one-to-many correspondence between learner outcomes and criteria.

Number 3. Demonstrate an understanding of factors and multiples by:

- determining multiples and factors of numbers less than 100
- identifying prime and composite numbers
- solving problems using multiples and factors.

[CN, PS, R, V]

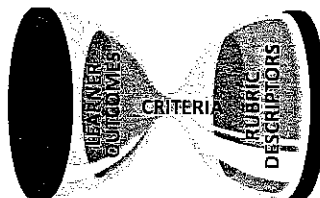
3. →

Step 1 →

Step 2 →

Step 3 →

Stated outcomes



Criteria	Level	Excellent	Proficient	Adequate	Limited
→ Solve a given problem (Number 3)	→	Implements an efficient plan to reach a correct solution.	Implements a practical plan to reach a substantially correct solution.	Implements a workable plan to reach a partially correct solution.	Implements a confusing plan to reach an incorrect solution.
Defend reasonableness of solution (Number 3; Process Skill - Reasoning)		Provides a compelling defense of the solution.	Provides a convincing defense of the solution.	Provides a reasonable defense of the solution.	Provides an unconvincing defense of the solution.

Determine Instructional Support and Formative Assessment Opportunities ← **Step 4**

Assist students to explore some of the many examples of items found in multiples in the context of the classroom: shoes on the boot rack, chair legs, boxes of oil pastels, packages of loose leaf paper, lines on notebook pages, pages in a stack of math textbooks. Many items are sold in multiples. Flyers from grocery stores or other sources will give numerous examples for exploration with students. Make the use of multiples explicit by using the term regularly when working with patterns or situations that involve multiples.

Provide regular opportunities for students to collaboratively solve challenging, unfamiliar multi-step problems. Pose questions to encourage students to think about the possible solutions to problems before they begin solving them.

- Will this solution be more or less than 100?
- Could the solution be as much as 500?
- Do you think this answer will be closer to 10 or 20?

Discuss and collect a variety of problem-solving strategies, such as using a chart, drawing a diagram, modeling with concrete materials, working backwards, etc. A strategies chart could be posted and added to as students suggest new strategies. Provide students with an opportunity to share their strategies with others, ask and answer questions about those strategies, and defend the reasonableness of their strategies and solutions.

How well did I...	Feedback from coach: I noticed... or...I have some suggestions for you.
• clearly identify the multiples I used as I worked on the problem?	
• explain my strategy in a way that helps you understand how I solved the problem?	
• clearly explain why I think my answer is a reasonable one?	